Experimental Neurology

A JOURNAL OF NEUROSCIENCE RESEARCH

EDITOR-IN-CHIEF
John R. Sladek, Jr.
University of Rochester
School of Medicine and Dentistry

FOUNDING EDITOR
William F. Windle

VOLUME 108, 1990

ACADEMIC PRESS, INC.
Harcourt Brace Jovanovich, Publishers
San Diego New York Boston London Sydney Tokyo Toronto

Copyright © 1990 by Academic Press, Inc.

ALL RIGHTS RESERVED

No part of this publication may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopy, recording, or any information storage and retrieval system, without permission in writing from the copyright owner.

The appearance of the code at the bottom of the first page of an article in this journal indicates the copyright owner's consent that copies of the article may be made for personal or internal use, or for the personal or internal use of specific clients. This consent is given on the condition, however, that the copier pay the stated per copy fee through the Copyright Clearance Center, Inc. (27 Congress Street, Salem, Massachusetts 01970), for copying beyond that permitted by Sections 107 or 108 of the U.S. Copyright Law. This consent does not extend to other kinds of copying such as copying for general distribution, for advertising or promotional purposes, for creating new collective works, or for resale. Copy fees for pre-1990 articles are as shown on the article title pages; if no fee code appears on the title page, the copy fee is the same as for current articles.

0014-4886/90 $3.00

MADE IN THE UNITED STATES OF AMERICA

This journal is printed on acid-free paper.

Contents of Volume 108

Number 1, April 1990

WILLEMINA M. MOLENAAR, VIRGINIA M.-Y. LEE, AND JOHN Q. TROJANOWSKI. Early Fetal Acquisition of the Chromaffin and Neuronal Immunophenotype by Human Adrenal Medullary Cells. An Immunohistological Study Using Monoclonal Antibodies to Chromogranin A, Synaptophysin, Tyrosine Hydroxylase, and Neuronal Cytoskeletal Proteins 1

MALCOLM SCHINSTINE AND CARSON J. CORNBROOKS. Axotomy Enhances the Outgrowth of Neurites from Embryonic Rat Septal–Basal Forebrain Neurons on a Laminin Substratum 10

WUTIAN WU, DAVID E. SCOTT, AND ELEANOR MILLER. Transplantation of the Pineal Gland in the Mammalian Third Cerebral Ventricle 23

MAIBRITT M. J. GIACOBINI, LARS OLSON, BARRY J. HOFFER, AND VICKI R. SARA. Truncated IGF-1 Exerts Trophic Effects on Fetal Brain Tissue Grafts 33

MASAOMI MIYAMOTO AND JOSEPH T. COYLE. Idebenone Attenuates Neuronal Degeneration Induced by Intrastriatal Injection of Excitotoxins 38

XIAO MING XU AND GEORGE F. MARTIN. The Response of Rubrospinal Neurons to Axotomy in the Adult Opossum, *Didelphis virginiana* 46

CARL L. FAINGOLD, EDWARD J. WALSH, JANINE K. MAXWELL, AND MARCUS E. RANDALL. Audiogenic Seizure Severity and Hearing Deficits in the Genetically Epilepsy-Prone Rat 55

NANCY Y. WALTON, SONNY GUNAWAN, AND DAVID M. TREIMAN. Brain Amino Acid Concentration Changes during Status Epilepticus Induced by Lithium and Pilocarpine 61

KIMIO YAMASHITA, AKITANE MORI, AND SABURO OTSUKI. Changes in Brain Thyrotropin-Releasing Hormone (TRH) of Seizure-Prone El Mice 71

ANGEL NÚÑEZ, ELIO GARCÍA-AUSTT, AND WASHINGTON BUÑO. *In Vivo* Electrophysiological Analysis of Lucifer Yellow-Coupled Hippocampal Pyramids 76

Brief Communications

RUSSELL L. MCBRIDE, EARL R. FERINGA, MICHAEL K. GARVER, AND JERRY K. WILLIAMS, JR. Retrograde Transport of Fluoro-Gold in Corticospinal and Rubrospinal Neurons 10 and 20 Weeks after T-9 Spinal Cord Transection 83

PHILIP A. SINGER AND SHARON MEHLER. Increased Glucose Use in the Hypoglossal Nucleus after Hypoglossal Nerve Transection in Aged Rats 86

LEON J. THAL, RONALD J. MANDEL, ROBERT D. TERRY, GYORGY BUZSAKI, AND FRED H. GAGE. Nucleus Basalis Lesions Fail to Induce Senile Plaques in the Rat 88

Number 2, May 1990

P. HANTRAYE, D. RICHE, M. MAZIERE, AND O. ISACSON. A Primate Model of Huntington's Disease: Behavioral and Anatomical Studies of Unilateral Excitotoxic Lesions of the Caudate–Putamen in the Baboon 91

MICHAEL J. RUSSELL, VIJAYA K. VIJAYAN, ROBERT B. GIBBS, JAMES W. GEDDES, CARL H. JACOBSON, AND CARL W. COTMAN. Long-Term Survival of Neural Tranplants to Senescence in Rats 105

J.-M. LEE, J. E. ADLER, AND I. B. BLACK. Regulation of Neurotransmitter Expression by a Membrane-Derived Factor 109

IAN F. POLLACK AND RAYMOND D. LUND. The Blood–Brain Barrier Protects Foreign Antigens in the Brain from Immune Attack 114

J. G. BROTON, R. P. YEZIERSKI, AND Å. SEIGER. Intraocular Grafts of Fetal Rat Spinal Cord: A Golgi Study of Neuronal Morphology and Organization 122

STEVEN R. ABRAM, JOHNATHAN B. KRUSKAL, GEORGE S. ALLEN, R. STANLEY BURNS, ROBERT PARKER, AND NOEL TULIPAN. Alterations in Prealbumin Concentration after Adrenal Autotransplantation for Parkinson's Disease 130

GERALD K. WEISS, JOHNNYE LEWIS, CARLOS JIMENEZ-RIVERA, ANTHONY VIGIL, AND MICHAEL E. CORCORAN. Antikindling Effects of Locus Coeruleus Stimulation: Mediation by Ascending Noradrenergic Projections 136

PATRICK P. MICHEL, BHUVANESHARI K. DANDAPANI, SIMON M. N. EFANGE, AND FRANZ HEFTI. Potential Evironmental Neurotoxins Related to 1-Methyl-4-phenylpyridinium: Selective Toxocity of 1-Methyl-4-(4′-acetamidophenyl)pyridinium and 1-Methyl-4-cyclohexylpyridinium for Dopaminergic Neurons in Culture 141

W. TERRELL STAMPS, RICHARD E. COGGESHALL, AND CLAIRE E. HULSEBOSCH. Computerized Ultrastructural Analysis of the Shape of the Active Synaptic Zones in Rat Spinal Cord 151

R. C. IANNELLO AND P. L. JEFFREY. Glycoproteins of Rat Skeletal Muscle Sarcolemma: Characterization by Two-Dimensional Gel Electrophoresis and Effect of Denervation .. 156

GERNOT S. DOETSCH, KIM W. JOHNSTON, AND CHARLES J. HANNAN, JR. Physiological Changes in the Somatosensory Forepaw Cerebral Cortex of Adult Raccoons following Lesions of a Single Cortical Digit Representation 162

ANNE PEREIRA DE VASCONCELOS, CATHERINE COLIN, DIDIER DESOR, MICHEL DIVRY, AND ASTRID NEHLIG. Influence of Early Neonatal Phenobarbital Exposure on Cerebral Energy Metabolism and Behavior 176

Number 3, June 1990

ANN-CHARLOTTE GRANHOLM, HANNA BERGMAN, LUDMILA MACKERLOVA, AND ANDERS BLOMQVIST. Intraocular Hypothalamic Transplants Containing Histaminergic Neurons: Innervation of Host Iris and Hippocampal Cografts 189

BRIAN M. DAVIS, JOSEPH L. AYERS, LOUISE KORAN, JOANNE CARLSON, MARY C. ANDERSON, AND SIDNEY B. SIMPSON, JR. Time Course of Salamander Spinal Cord Regeneration and Recovery of Swimming: HRP Retrograde Pathway Tracing and Kinematic Analysis 198

JAMES W. GEDDES, LESLIE D. CAHAN, SUZANNE M. COOPER, RONALD C. KIM, BEN H. CHOI, AND CARL W. COTMAN. Altered Distribution of Excitatory Amino Acid Receptors in Temporal Lobe Epilepsy 214

POW F. KWO-ON-YUEN, RONALD MANDEL, ANDREW D. CHEN, AND LEON J. THAL. Tetrahydroaminoacridine Improves the Spatial Acquisition Deficit Produced by Nucleus Basalis Lesions in Rats 221

NOBUYUKI TAKEI, HIROKO TSUKUI, KONOSUKE KUMAKURA, AND HIROSHI HATANAKA. Monitoring of Acetylcholine Released from Postnatal Rat Basal Forebrain Cholinergic Neurons Cultured on Membrane Filter by Cell Bed Perfusion System and HPLC–ECD 229

ALBERTO MARTINEZ-ARIZALA, DONALD D. RIGAMONTI, JOSEPH B. LONG, JOYCE M. KRAIMER, AND JOHN W. HOLADAY. Effects of NMDA Receptor Antagonists following Spinal Ischemia in the Rabbit 232

P. M. DOUGHERTY, J. T. QIAO, R. C. WIGGINS, AND N. DAFNY. Microiontophoresis of Cocaine, Desipramine, Sulpiride, Methysergide, and Naloxone in Habenula and Parafasciculus 241

LEV G. GOLDFARB, PAUL BROWN, DMITRY GOLDGABER, DAVID M. ASHER, RICHARD RUBENSTEIN, W. TED BROWN, PEDRO PICCARDO, RICHARD J. KASCSAK, J. W. BOELLAARD, AND D. CARLETON GAJDUSEK. Creutzfeldt–Jakob Disease and Kuru Patients Lack a Mutation Consistently Found in the Gerstmann–Sträussler–Scheinker Syndrome 247

T. F. FREUND, G. BUZSAKI, A. LEON, AND P. SOMOGYI. Hippocampal Cell Death following Ischemia: Effects of Brain Temperature and Anesthesia 251

ARTHUR D. ROSEN AND JACK LUBOWSKY. Modification of Spontaneous Unit Discharge in the Lateral Geniculate Body by a Magnetic Field 261

Brief Communications

JAMES R. GOSS, CALEB E. FINCH, AND DAVID G. MORGAN. GFAP RNA Increases during a Wasting State in Old Mice 266

JOHN W. OLNEY, CHARLES F. ZORUMSKI, GREGORY R. STEWART, MADELON T. PRICE, GUANGJIAN WANG, AND JOANN LABRUYERE. Excitotoxicity of L-DOPA and 6-OH-DOPA: Implications for Parkinson's and Huntington's Diseases 269

Author Index for Volume 108 273

NOTICE

The Subject Index for Volume 108 will appear in the December 1990 issue as part of a cumulative index for the year 1990.